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$R^2$  is a straight-chained alkyl moiety selected from the group consisting of  $-(CH_2)_3CH_3$ ,  $-(CH_2)_5CH_3$ ,  $-(CH_2)_7CH_3$  and  $-(CH_2)_9CH_3$ , or an alkenyl group or alkynyl group having from 1 to 23 carbon atoms in the aliphatic chain;

$Z^2$  is a phosphorylcholine attachment-inhibiting group selected from the group consisting of  $-X^1$ ,  $-OX^1$ ,  $-X^2X^3$  and  $-OX^2X^3$ ;

$X^1$  is selected from the group consisting of  $-C(O)H$ ,  $-CO_2H$ ,  $CH_3$ ,  $C(CH_3)_3$ ,  $Si(CH_3)_3$ ,  $SiCH_3(C(CH_3)_3)_2$ ,  $Si(C(CH_3)_3)_3$ ,  $Si(PO_4)_2C(CH_3)_3$ , a phenyl group, an alkyl-substituted phenyl group having from 1 to 6 carbons in the alkyl chain, an alkyl chain having from 1 to 6 carbons, an amino group, a fluorine, a chlorine, and a group having the formula  $C(R^3R^4)OH$ ;

$X^2$  is selected from the group consisting of  $CH_2$ ,  $C(CH_3)_2$ ,  $Si(PO_4)_2$ ,  $Si(CH_3)_2$ ,  $SiCH_3PO_4$ ,  $C(O)$  and  $S(O)_2$ ;

$X^3$  is selected from the group consisting of  $-C(O)H$ ,  $-CO_2H$ ,  $-CH_3$ ,  $-C(CH_3)_3$ ,  $-Si(CH_3)_3$ ,  $-SiCH_3(C(CH_3)_3)_2$ ,  $-Si(C(CH_3)_3)_3$ ,  $-Si(PO_4)_2C(CH_3)_3$ , a phenyl group, an alkyl-substituted phenyl group having from 1 to 6 carbons in the alkyl chain, an alkyl chain having from 1 to 6 carbons, an amino moiety, a chlorine, a fluorine, or a group having the formula  $C(R^3R^4)OH$ , wherein each of  $R^3$  and  $R^4$  is independently an alkyl chain having from 1 to 6 carbons, a phenyl group or an alkyl-substituted phenyl group having from 1 to 6 carbons in the alkyl chain;

wherein when  $Z^2$  is an amino group,  $R^2$  is an aliphatic chain having from 1 to 9 or from 19 to 23 carbon atoms in the aliphatic chain;

and wherein the compound comprises at least about 5 mole percent of the lipid.

16. (amended) A compound having the formula  $R^1-Y^1-CHZ^1-CH(NY^2Y^3)-CH_2-Z^2$ , wherein:

$R^1$  is a straight-chained alkyl, alkenyl or alkynyl group having from 5 to 19 carbon atoms in the aliphatic chain;

$Y^1$  is  $-CH=CH-$ ,  $-C\equiv C-$  or  $-CH(OH)CH(OH)-$ ;

$Z^1$  is OH or a phosphorylcholine attachment-inhibiting group selected from the group consisting of  $-X^1$ ,  $-OX^1$ ,  $-X^2X^3$  and  $-OX^2X^3$ ;

$Y^2$  is H, a phenyl group, an alkyl-substituted phenyl group having from 1 to about 6 carbons in the alkyl chain, or an alkyl chain having from 1 to 10 carbons;

$Y^3$  is H or a group having the formula  $-C(O)R^2$  or  $-S(O)_2R^2$ ;

R<sup>2</sup> is a straight-chained alkyl moiety selected from the group consisting of -(CH<sub>2</sub>)<sub>3</sub>CH<sub>3</sub>, -(CH<sub>2</sub>)<sub>5</sub>CH<sub>3</sub>, -(CH<sub>2</sub>)<sub>7</sub>CH<sub>3</sub> and -(CH<sub>2</sub>)<sub>9</sub>CH<sub>3</sub>, an alkenyl group having from 1 to 23 carbon atoms in the aliphatic chain and an alkynyl group having from 1 to 23 carbon atoms in the aliphatic chain;

Z<sup>2</sup> is OH or a phosphorylcholine attachment-inhibiting group selected from the group consisting of -X<sup>1</sup>, -OX<sup>1</sup>, -X<sup>2</sup>X<sup>3</sup> and -OX<sup>2</sup>X<sup>3</sup>;

X<sup>1</sup> is selected from the group consisting of -C(O)H, -CO<sub>2</sub>H, CH<sub>3</sub>, C(CH<sub>3</sub>)<sub>3</sub>, Si(CH<sub>3</sub>)<sub>3</sub>, SiCH<sub>3</sub>(C(CH<sub>3</sub>)<sub>3</sub>)<sub>2</sub>, Si(C(CH<sub>3</sub>)<sub>3</sub>)<sub>3</sub>, Si(PO<sub>4</sub>)<sub>2</sub>C(CH<sub>3</sub>)<sub>3</sub>, a phenyl group, an alkyl-substituted phenyl group having from 1 to 6 carbons in the alkyl chain, an alkyl chain having from 1 to 6 carbons, an amino group, a fluorine, a chlorine, and a group having the formula C(R<sup>3</sup>R<sup>4</sup>)OH;

X<sup>2</sup> is selected from the group consisting of CH<sub>2</sub>-, C(CH<sub>3</sub>)<sub>2</sub>-, Si(PO<sub>4</sub>)<sub>2</sub>-, Si(CH<sub>3</sub>)<sub>2</sub>-, SiCH<sub>3</sub>PO<sub>4</sub>-, C(O)- and S(O)<sub>2</sub>-;

X<sup>3</sup> is selected from the group consisting of -C(O)H, -CO<sub>2</sub>H, -CH<sub>3</sub>, -C(CH<sub>3</sub>)<sub>3</sub>, -Si(CH<sub>3</sub>)<sub>3</sub>, -SiCH<sub>3</sub>(C(CH<sub>3</sub>)<sub>3</sub>)<sub>2</sub>, -Si(C(CH<sub>3</sub>)<sub>3</sub>)<sub>3</sub>, -Si(PO<sub>4</sub>)<sub>2</sub>C(CH<sub>3</sub>)<sub>3</sub>, a phenyl group, an alkyl-substituted phenyl group having from 1 to 6 carbons in the alkyl chain, an alkyl chain having from 1 to 6 carbons, an amino moiety, a chlorine, a fluorine, or a group having the formula C(R<sup>3</sup>R<sup>4</sup>)OH, wherein each of R<sup>3</sup> and R<sup>4</sup> is independently an alkyl chain having from 1 to 6 carbons, a phenyl group or an alkyl-substituted phenyl group having from 1 to 6 carbons in the alkyl chain;

wherein when Z<sup>2</sup> is an amino group, R<sup>2</sup> is an aliphatic chain having from 1 to 9 or from 19 to 23 carbon atoms in the aliphatic chain.

27. (amended) The compound of claim 16 having the formula CH<sub>3</sub>(CH<sub>2</sub>)<sub>12</sub>-CH=CH-CHZ<sup>1</sup>-CH(NHY<sup>3</sup>)-CH<sub>2</sub>-Z<sup>2</sup>;